PART 532 - BIOLOGICAL AND AGRICULTURAL ENGINEERING

532.00 General.

Biological and agricultural engineering is the application of physical, ecological, and biological sciences to develop engineering solutions that conserve, improve and sustain the environment and natural resources. Biological and agricultural engineering combines conventional engineering principles and design with the applied biological sciences. The purpose of biological and agricultural engineering is to develop engineering solutions that recognize and address the natural processes occurring due to biological organisms and their surroundings. The designer will consider the effect of the proposed solution on plants, animals and other biological organisms as well as assessing how the organisms will impact the effectiveness of the engineering solution.

NRCS engineering assistance can result in both temporary and permanent changes to the ecological resource on millions of acres. The application of biological and agricultural engineering to these changes will result in changes that are more harmonious with the natural ecosystem.

The basic principles of biological and agricultural engineering are to be applied as an integral part of engineering work. They must be considered early in planning and continued through design, construction, operation and maintenance as necessary to insure appropriate, functional, and efficient results.

532.01 NRCS Biological and Agricultural engineering assistance.

NRCS will provide technical assistance that includes the basic principles of biological and agricultural engineering. NRCS is to provide technical information, guidelines, and standards together with planning and design assistance to ensure that proposed solutions conserve, improve and sustain air, plant, animal, soil, and water resources. Appropriate specialists such as biologists, biological engineers, microbiologists and organic chemists may be involved, as necessary, to resolve anticipated interactions with biological organisms. Assistance shall be

provided in conformance with the National Conservation Planning Handbook, Field Office Technical Guide and provisions of the General Manual.

Biological and agricultural engineering principles, as appropriate, will be included in new or revised NRCS practice standards and conservation practice physical effects. The agricultural engineer on the national conservation engineering division staff will provide guidance and leadership in biological and agricultural engineering. Each state shall assign leadership in biological and agricultural engineering to an engineer trained in the basic biological and agricultural engineering principles. Biological and agricultural engineering will be incorporated into planning, design, layout and construction training.

532.02 Non-NRCS Biological and Agricultural engineering services.

The services of other Government agencies, educational institutions, and private firms or other qualified individuals can be included for planning, design, and supervision of construction.